

Eastern Research Group 601 Keystone Park Drive Suite 700 Morrisville, NC 27560

November 29, 2018

Ms. Doris Chen & Lewis Weinstock U.S. Environmental Protection Agency - OAQPS 109 T.W. Alexander Drive, Mail Code: C304-06 RTP, NC 27709

Project Name: EtO Region 5

Dear Ms. Doris Chen & Lewis Weinstock,

This report contains the analytical results for the sample(s) received under chain(s) of custody by Eastern Research Group on 11/15/18 11:09 through 11/21/18 10:22.

The test results in this report are in compliance with NELAC accreditation requirements for the certified parameters. All analyses were performed as described in the US EPA-approved QAPP, under the contract for UATMP, NATTS, CSATAM, PAMS and NMOC support (US EPA Contract No. EP-D-14-030). This cover page is an integral part of this report, and any exceptions or comments are noted on the last page.

Release of the data contained in this data package and in the data submitted in the electronic data deliverable, has been authorized by the Program Manager, or the Program Manager's designee as verified by the following signature.

The issuance of the final Certificate of Analysis takes precedence over any previous Report. If you have any questions, please contact me at 919-468-7924.

Sincerely,

Julie Swift
Program Manager
julie.swift@erg.com

The information contained in this report and its attachment(s) are intended only for the use of the individual to whom it is addressed and may contain information that is privileged, confidential, or exempt from disclosure. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this report is strictly prohibited. If you have received this report in error, please notify julie.swift@erg.com and delete the report without retaining any copies.

Page 1 of 19



U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

ANALYTICAL REPORT FOR SAMPLES

<u>SampleName</u>	<u>LabNumber</u>	<u>Matrix</u>	<u>Sampled</u>	Received
WB Warehouse	8111508-03	Air	11/14/18 10:00	11/15/18 11:09
WB Trip Blank	8111508-04	Air	11/14/18 10:00	11/15/18 11:09
WB Village Hall	8112012-01	Air	11/17/18 10:07	11/20/18 09:55
WB Warehouse C1	8112012-02	Air	11/17/18 09:57	11/20/18 09:55
WB Warehouse C2	8112012-03	Air	11/17/18 09:57	11/20/18 09:55
WB Village Hall C1	8112113-01	Air	11/20/18 09:30	11/21/18 10:22
WB Village Hall C2	8112113-02	Air	11/20/18 09:29	11/21/18 10:22
WB Warehouse	8112113-03	Air	11/20/18 09:21	11/21/18 10:22
Gower ES	8112113-04	Air	11/20/18 10:36	11/21/18 10:22
Gower MS	8112113-05	Air	11/20/18 09:39	11/21/18 10:22
Willow Pond Park	8112113-06	Air	11/20/18 10:10	11/21/18 10:22
Watertower	8112113-07	Air	11/20/18 09:54	11/21/18 10:22
Hinsdale South HS	8112113-08	Air	11/20/18 10:25	11/21/18 10:22
West Neighborhood	8112113-09	Air	11/20/18 10:45	11/21/18 10:22

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 2 of 19



U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

Analyte

Ethylene oxide

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

Description: WB Warehouse

Pressure @ Receipt: 2.00" Hg

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Lab ID: 8111508-03 Sampled: 11/14/18 10:00 Canister #: A21028 **Received:** 11/15/18 11:09 **Comments:** Start 10:00 11/13/18 Probe #10315 Analyzed: 11/27/18 02:53

Air Toxics by EPA Compendium Method TO-15

Results **MDL** ppbv ug/m³ Flag ppbv 1.31 2,36 0.0453

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 3 of 19



U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

Description: WB Trip Blank Pressure @ Receipt: 29.50" Hg

Comments: Trip Blank

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Sampled: 11/14/18 10:00

Received: 11/15/18 11:09 Analyzed: 11/27/18 03:58

Air Toxics by EPA Compendium Method TO-15

8111508-04

Results

ppbv ug/m³

Flag

Canister #: 5037

MDL ppbv

Analyte Ethylene oxide

ND 0.0453

Lab ID:

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 4 of 19



U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

Description: WB Village Hall

Pressure @ Receipt: 2.00" Hg

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Lab ID: 8112012-01 Sampled: 11/17/18 10:07 Canister #: A21096 **Received:** 11/20/18 09:55 **Comments:** Start 10:24 11/16/18 Probe #10313 Analyzed: 11/27/18 13:44

Air Toxics by EPA Compendium Method TO-15

Results

<u>MDL</u>

Ethylene oxide

Analyte

ppbv ug/m³

Flag ppbv

0.456 0.82 0.0453

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 5 of 19



U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -**Description:** WB Warehouse C1

Pressure @ Receipt: 2.50" Hg

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Lab ID: 8112012-02 Sampled: 11/17/18 09:57 Canister #: SAT085 **Received:** 11/20/18 09:55 **Comments:** Col 1 Start 10:09 11/16/18 Probe #10314 **Analyzed:** 11/27/18 14:47

Air Toxics by EPA Compendium Method TO-15

Results

MDL

Ethylene oxide

Analyte

ppbv

ppbv ug/m³ Flag 1.00 1.81 0.0453

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 6 of 19



U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -**Description:** WB Warehouse C2

Pressure @ Receipt: 3.50" Hg

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Lab ID: 8112012-03 Sampled: 11/17/18 09:57 Canister #: SAT114 **Received:** 11/20/18 09:55 **Comments:** Col 2 Start 10:09 11/16/18 Probe #10315 Analyzed: 11/27/18 15:49

Air Toxics by EPA Compendium Method TO-15

MDL Results Flag

Analyte ppbv ug/m³ ppbv Ethylene oxide 1.00 1.81 0.0453

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 7 of 19



U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -**Description:** WB Village Hall C1

Pressure @ Receipt: 2.00" Hg

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Lab ID: 8112113-01 **Sampled:** 11/20/18 09:30 Canister #: A21102 **Received:** 11/21/18 10:22 **Comments:** Col 1 Start 09:32 11/19/18 Probe #10315 **Analyzed:** 11/27/18 18:57

Air Toxics by EPA Compendium Method TO-15

Results

MDL

Analyte Ethylene oxide ppbv ug/m³ 3.38 6.10

Flag

ppbv 0.0453

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 8 of 19



U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

Analyte

Ethylene oxide

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

 Description:
 WB Village Hall C2
 Lab ID:
 8112113-02
 Sampled: 11/20/18 09:29

 Pressure @ Receipt:
 3.50" Hg
 Canister #:
 SAT013
 Received: 11/21/18 10:22

 Comments:
 Col 2 Start 09:33 11/19/18 Probe #10315
 Analyzed: 11/27/18 19:59

Air Toxics by EPA Compendium Method TO-15

0.0453

Results MDL ppbv ug/m³ Flag ppbv

6,30

3.49

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 9 of 19



 $\hbox{U.s. Environmental Protection Agency - OAQPS}\\$

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

 Description:
 WB Warehouse
 Lab ID:
 8112113-03
 Sampled: 11/20/18 09:21

 Pressure @ Receipt:
 3.50" Hg
 Canister #:
 5077
 Received: 11/21/18 10:22

 Comments:
 Start 09:20 11/19/18 Probe #10314
 Analyzed: 11/27/18 23:06

Air Toxics by EPA Compendium Method TO-15

Results
ppbv ug/m³ Fla

MDL Flag ppbv

Ethylene oxide

Analyte

6.61

3.66

0.0453

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 10 of 19



U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

 Description:
 Gower ES
 Lab ID:
 8112113-04
 Sampled: 11/20/18 10:36

 Pressure @ Receipt:
 3.50" Hg
 Canister #:
 SAT092
 Received: 11/21/18 10:22

 Comments:
 Start 10:36 11/19/18 Probe #10293
 Analyzed: 11/28/18 00:08

Air Toxics by EPA Compendium Method TO-15

 Analyte
 ppbv
 ug/m³
 Flag
 ppbv

 Ethylene oxide
 ND
 ND
 U
 0.0453

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 11 of 19



 $\hbox{U.s. Environmental Protection Agency - OAQPS}\\$

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

 Description:
 Gower MS
 Lab ID:
 8112113-05
 Sampled: 11/20/18 09:39

 Pressure @ Receipt:
 2.00" Hg
 Canister #: 18879
 Received: 11/21/18 10:22

 Comments:
 Start 09:46 11/19/18 Probe #10311
 Analyzed: 11/28/18 01:11

Air Toxics by EPA Compendium Method TO-15

 Analyte
 ppbv
 ug/m³
 Flag
 ppbv

 Ethylene oxide
 ND
 ND
 U
 0.0453

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 12 of 19



U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

 Description:
 Willow Pond Park
 Lab ID:
 8112113-06
 Sampled: 11/20/18 10:10

 Pressure @ Receipt:
 2.50" Hg
 Canister #:
 SAT089
 Received: 11/21/18 10:22

 Comments:
 Start 10:10 11/19/18 Probe #10294
 Analyzed: 11/28/18 02:13

Air Toxics by EPA Compendium Method TO-15

 Analyte
 ppbv
 ug/m³
 Flag
 ppbv

 Ethylene oxide
 ND
 ND
 U
 0.0453

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 13 of 19



U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

 Description:
 Watertower
 Lab ID:
 8112113-07
 Sampled: 11/20/18 09:54

 Pressure @ Receipt:
 2.00" Hg
 Canister #: SAT169
 Received: 11/21/18 10:22

 Comments:
 Start 09:59 11/19/18 Probe #10312
 Analyzed: 11/28/18 03:15

Air Toxics by EPA Compendium Method TO-15

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 14 of 19



 $\hbox{U.s. Environmental Protection Agency - OAQPS}\\$

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

 Description:
 Hinsdale South HS
 Lab ID:
 8112113-08
 Sampled: 11/20/18 10:25

 Pressure @ Receipt:
 4.00" Hg
 Canister #:
 A21051
 Received:
 11/21/18 10:22

 Comments:
 Start 10:25 11/19/18 Probe #10076
 Analyzed:
 11/28/18 04:18

Air Toxics by EPA Compendium Method TO-15

 Analyte
 ppbv
 ug/m³
 Flag
 ppbv

 Ethylene oxide
 ND
 ND
 U
 0.0453

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 15 of 19



 $\hbox{U.s. Environmental Protection Agency - OAQPS}\\$

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

 Description:
 West Neighborhood
 Lab ID:
 8112113-09
 Sampled: 11/20/18 10:45

 Pressure @ Receipt:
 3.00" Hg
 Canister #:
 SAT025
 Received: 11/21/18 10:22

 Comments:
 Start 10:45 11/19/18 Probe #10310
 Analyzed: 11/28/18 05:20

Air Toxics by EPA Compendium Method TO-15

 Analyte
 ppbv
 ug/m³
 Flag
 ppbv

 Ethylene oxide
 ND
 ND
 U
 0.0453

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 16 of 19



U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
Air Toxics by EPA Compendium M Batch B8K2604 - Summa Canister Pro		5 - Quality Co	ntrol			
Blank (B8K2604-BLK1)			Prepared: 11/20/18	Analyzed: 11/26/18		
Ethylene oxide	ND	ppbv				U
Batch B8K2704 - Summa Canister Pro	ер					
Blank (B8K2704-BLK1)			Prepared: 11/20/18	Analyzed: 11/27/18		
Ethylene oxide	ND	ppbv				U
Duplicate (B8K2704-DUP1)	Source	e: 8112012-02	Prepared: 11/17/18	Analyzed: 11/27/18		
Ethylene oxide	0.999	ppbv	1.00	0.0600	25	
Duplicate (B8K2704-DUP2)	Source	e: 8112012-03	Prepared: 11/17/18	Analyzed: 11/27/18		
Ethylene oxide	1.03	ppbv	1.00	2.40	25	
Duplicate (B8K2704-DUP3)	Source	e: 8112113-01	Prepared: 11/20/18	Analyzed: 11/27/18		
Ethylene oxide	3.37	ppbv	3.38	0.329	25	
Duplicate (B8K2704-DUP4)	Source	e: 8112113-02	Prepared: 11/20/18	Analyzed: 11/27/18		
Ethylene oxide	3.40	ppbv	3.49	2.42	25	

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 17 of 19



 $\hbox{U.s. Environmental Protection Agency - OAQPS}\\$

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Analyte Result Units % Difference Limit (%) Notes

Air Toxics by EPA Compendium Method TO-15 - Quality Control

Sequence 1811061

Calibration Check (1811061-CCV1) Prepared & Analyzed: 11/26/18

Ethylene oxide 2.79 ppbv 9.5 30.00

Sequence 1811063

Calibration Check (1811063-CCV1) Prepared & Analyzed: 11/27/18

Ethylene oxide 2.74 ppbv 9.8 30.00

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 18 of 19



U.S. Environmental Protection Agency - OAQPS

109 T.W. Alexander Drive, Mail Code: C304-C

RTP, NC 27709

ATTN: Ms. Doris Chen & Lewis Weinstock

PHONE: (919) 541-4957 FAX: -

FILE #: 0344.00

REPORTED: 11/29/18 11:59

SUBMITTED: 11/15/18 to 11/21/18

AQS SITE CODE:

SITE CODE: EtO Region 5

Notes and Definitions

U Under Detection Limit
ND Analyte NOT DETECTED

NR Not Reported

MDL Method Detection Limit
RPD Relative Percent Difference

Note: The test results meet all requirements of NELAC; however the following analytes are not accredited: 1,2,4-trimethylbenzene, 1,2-dibromoethane, 1,2-dichloropropane, 1,3,5-trimethylbenzene, 1,3-butadiene, acrolein, bromochloromethane, bromodichloromethane, bromoform, carbon disulfide, dibromochloromethane, dichlorodifluoromethane, dichlorotetrafluoroethane, ethyl acrylate, ethyl tert butyl ether, hexachloro-1,3-butadiene, octane, propylene, tert amyl methyl ether, tetrachloroethylene, tran-1,2-dichloroethylene, trchlorofluoromethane, and trichlorotrufluoroethane.

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 19 of 19